REMARKS

Introduction

Claims 1-6 and 8-14 remain pending in the application. Claim 7 has been canceled without prejudice or disclaimer of subject matter. Claims 1, 4-6, 12, and 13 have been amended. Claims 1, 5, and 6 are in independent form.

Claims 1, 5 and 6, the independent claims, have been amended to incorporate the technical feature "by reporting a slot number corresponding to the data service processing unit and a unit type of the data service processing unit to a control unit via the data service processing unit and by identifying the type of a bus connected with the data service processing unit as a packet bus" based on now-canceled claim 7 and on the description from page 12, line 24, through page, 13 line 10.[1]

The claim objections

Claims 1-14 were objected to for th reasons given at paragraph 1 of the Office Action.

The Office Action suggests changing "traffic" in claim 1, line 15, to "the traffic". However, Applicant respectfully traverses this objection, and submits that "traffic" in claim 1, line 15, refers to traffic from the encapsulation/de-encapsulation module and thus does not refer back to "traffic" recited at line 9 in claim 1.

---

[1]It is of course to be understood that the references to various portions of the present application are by way of illustration and example only, and that the claims are not limited by the details shown in the portions referred to.

Applicant has amended "packets" in claim 1, line 19, to "the packets" as suggested in the Office Action, and has amended "packets" in claim 5, lines 26, 28 and 33 and, in claim 6, lines 11 and 13, to "the packets".

Applicant has amended "an encapsulating/de-encapsulating module" in claim 6, line 10, to be "the encapsulating/de-encapsulating module".

Applicant has defined the term "TDM" in claims 1, 5, and 6 as "Time Division Multiplexing".

Applicant has defined the term "GFP" in claim 4, line 2, as "Generic Framing Procedure".

Applicant has defined the term "CID" in claim 4, line 3, as "Channel ID".

The objections in claims 2, 3 and 7-14 are accordingly overcome due to their dependency from the base claims.

Applicant has removed the phrase "adapted to" as recited in claims 1 and 5 in order to advance prosecution.

Accordingly, withdrawal of the claim objections is respectfully requested.

The objection to the drawings

At paragraph 2 of the Office Action the Examiner states that Figure 1 should be designated as "Prior Art." Applicant has so designated that figure, and submits a replacement sheet hereto. No new matter has been added.

Accordingly, withdrawal of this objection is respectfully requested.

The rejection under 35 U.S.C. § 112

Claims 4, 12, and 13 were rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The claims have been carefully reviewed and amended as deemed necessary to ensure that they conform fully to the requirements of Section 112, second paragraph, with special attention to the points raised at paragraph 4 of the Office Action. Applicant submits that no new matter has been added. Applicant has the following comments in particular.

Applicant has amended the recitation "the GFP" in claim 4, line 2, to "GFP". (The Office Action says "See also in claims 5 and 6" but this recitation is not recited in claims 5 and 6.)

Applicant has amended the recitation "the high-priority traffic" in claim 12, line 4, to "high-priority traffic".

Applicant has amended the recitation "the low-priority traffic" in claim 12, line 4, to "low-priority traffic".

Applicant has amended the recitation "the high-priority service" in claim 13, line 4, to "high-priority traffic", where the term change from "service" to "traffic" is a formal change.

Applicant has amended the recitation "the low-priority service" in claim 13, line 4, to "low-priority traffic".

It is believed that the rejection under Section 112, second paragraph, has been obviated, and its withdrawal is therefore respectfully requested.

The rejections under 35 U.S.C. § 103(a)

Claims 1-14 were rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 6,621,828 to Field, et al. in view of U.S. Patent No. 5,809,021 to Diaz, et al.

Applicants submit that independent claims 1, 5, and 6, together with the claims dependent therefrom, are patentably distinct from the cited references for at least the following reasons.

The Examiner asserts that Diaz in column 24, lines 35-49, discloses the feature of identifying the type of a bus connected with the data service processing unit as a packet bus. Applicant respectfully traverses the rejections.

Diaz in column 24, lines 35-49, discusses a wideband bus overlay. A SONET/SDH time division multiplexing (TDM) scheme overlayed onto isochronous time slots exclusively assigned to the wideband bus overlay may be used. This SONET/SDH format allows for transparent multiplexing and crossconnect of plesiochronous signals including T1, E1, T3 and E3 signals. T3/E3 and TU-3 formats are adapted into the STS-1/SPE format, T1 is adapted into the VT1.5 format, and E1 is adapted into the VT2 format. Data from a SONET/SDH or T3/E3 interface is placed onto the ingress bus in a STS-1/TU-3 format which includes SPE/VC pointer information from plesiochronous synchronization. Each interface is programmed with an egress time slot interchange (TSI) which determines which VTs are to be sourced from the egress bus, and in what order the VTs are to be mapped into an outgoing STS-1/TU-3 or T3/E3. Hence, it can be seen from this portion that Diaz relates to the building of three unique bus overlays on the same physical bus configured to service three different types of telecommunications services (see column 30, lines 27-29).

Based on the above analysis, it can be concluded:

(I) The object of Diaz is to provide a SONET/SDH format for multiplexing and crossconnect of a plurality of plesiochronous signals on the same physical bus.

However, the present application provides an integrated cross-switching unit which is connected with both of the TDM line unit and the data service processing unit and can identify the traffic source, thus the use of only one such integrated cross-switching unit can reduce the number of the backplane buses.

Hence, the present application differs from the object of Diaz, and thus Diaz, even if combined with Field, gives no motivation for a person having ordinary skill in the art to achieve the solution of the present application.

(II) In Diaz, each interface is programmed with an egress time slot interchange (TSI) which determines which VT's are to be sourced from the egress bus, and in what order the VT's are to be mapped into an outgoing STS-1/TU-3 or T3/E3. That is, the egress bus source of the VT's is determined based on the programmed TSI, and it can be understood that the TSI is just an identifier for identifying each interface but not the type of the egress bus. Further, the TSI does not determine the egress bus as a packet bus.

However, the bus identification module identifies the traffic source by reporting a slot number corresponding to the data service processing unit and a unit type of the data service processing unit to a control unit via the data service processing unit and by identifying the type of a bus connected with the data service processing unit as a packet bus. It is clear that the source of traffic is determined by identifying the type of a bus connected with the data service processing unit. Further, the bus identification module identifies the type of the bus

connected with the data service processing unit as a packet bus, which is not disclosed by Diaz.

It is clear that the features "by reporting a unit type of the data service processing unit to a control unit" and "by identifying the type of a bus connected with the data service processing unit as a packet bus" are not disclosed by Diaz.

Field does not cure the deficiencies of Diaz. Hence, even a combination of Field and Diaz (assuming such a combination would be permissible) would give no teaching, suggestion, or motivation for a person having ordinary skill in the art to arrive at the technical solution of amended claim 1 of the present invention.

Accordingly, the amended claim 1 of the present invention is non-obvious over Field and Diaz.

Independent claims 5 and 6 are respectfully submitted to be patentable under 35 U.S.C. § 103(a) for at least the same reasons as discussed above in connection with amended claim 1.

Dependent claims 2-4 and 8-14 are respectfully submitted to be patentable under 35 U.S.C. § 103(a) at least due to their dependencies from independent claims 1 and 6. Since each dependent claim is also deemed to define an additional aspect of the invention, however, the individual reconsideration of the patentability of each on its own merits is respectfully requested.

Conclusion

It is submitted that all of the stated grounds of rejection have been properly traversed. Applicant therefore respectfully submits that the Examiner reconsider all presently outstanding rejections and that they be withdrawn. Applicant believes that a full and complete reply has been made to the outstanding final Office Action and, as such, allowance of the present application is earnestly solicited.

Respectfully submitted,

Raymond A. DiPerna
c/o Ladas & Parry LLP
26 West 61st Street
New York, New York 10023
Reg. No. 44063
Tel. No. (212) 708-1950